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THE EFFICACY OF INTENSIVE DIAGNOSIS AND
REMEDICATION FOR LAGGARD LEARNERS

by



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A THESIS

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ABSTRACT

The main purpose of the study was to determine whether adequate diagnosis, intensive development of remedial treatment programs and detailed follow-up had any effect on the improvement of pupils diagnosed as having a learning deficit.

Subjects were four grade two students, two in each of the grade two classrooms at Glen Allen School in Sherwood Park, Alberta. The remaining grade two students in their respective classes were used as the control group by which comparisons were made. Extensive background information was gathered on each of the four subjects. Additionally, the four subjects were administered the Wechsler Intelligence Scale for Children (WISC), Illinois Test of Psycholinguistic Abilities (ITPA), The Bender Visual Motor Gestalt Test for Children (BVMGT) and the Wide Range Achievement Test (WRAT), pre- and posttreatment. The control group was also pre- and posttested with the WRAT.

The posttreatment data collected on the WISC, ITPA, BVMGT and WRAT, along with teacher, administrator and parental interview material was employed to assess the value of the remedial treatment.

The four treatment subjects demonstrated movement from a position of being behind in spelling, arithmetic and reading skills to a position equal to, or in excess of, that of their control group peers.

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INTRODUCTION

Teachers and administrators have continually pointed out to the present writer their frustration with the situation which develops when children are diagnosed and classified as having learning problems and then left. The present writer has wondered why a treatment program has not been designed and in the event that a program has been designed, why such a program is not followed up to determine the outcome.

There is a growing body of evidence that the primary school years significantly influence the educational development of the child. Bloom (1964) summarized a number of longitudinal studies and indicated that approximately fifty percent of general achievement at grade twelve had been reached by the end of grade three. He likewise underlined the significance of the early school years for the development of the child's attitude toward school and his subsequent patterns of achievement. In a similar vein, Ragan and Moss (1962) have emphasized the importance of the primary years for the development of the child's attitudes, values, and involvement with the educative process.

Hence, the main purpose of this study is not only to classify the students but to determine whether adequate diagnosis, development of remedial treatment programs, and follow-up of a detailed nature has any affect on the improvement of pupils diagnosed as having some form of learning disability.

It was with the spirit of Alfred Benet (1909), having constructed the Benet-Simon Scale, published a book entitled *Modern Ideas about*

Children. One of his chapters was entitled 'Educability of Intelligence'. In this chapter he stated that since we had now discovered the evil (mental retardation), our next step was to cure it. He then proposed that the cure for mental retardation was specific training of attention, memory, reasoning, and other faculties. He consequently organized special classes for the mentally retarded and designed curricula to develop their intelligence.

Writing of the "sacred cows" of diagnosis as applied to learning disabilities, Wolfensberger (1965) noted that

"Early diagnosis is desirable when it leads to prevention, early treatment, or constructive counseling; it is irrelevant if it is purely academic and does not change the course of events; it is harmful if, in balance, child or family reap more disadvantages than benefits." (p. 65).

It was with this idea in mind that the present writer decided to devote his time and energy towards developing the following research project.

The present research focused on the grade two level. At the beginning of Grade Two, students are expected to read, spell, write simple sentences and have some understanding of simple number concepts.

The sample for the present study was composed of four students, identified by teachers and administrators as having learning difficulties. The four students attended two different classrooms in Glen Allan School in Sherwood Park.

The following was a procedure by which the investigator attempted to:

- (a) diagnose the specific learning disability of each subject.
- (b) set up a treatment program for the disability areas of each subject.

- (c) obtain measures of the class average in reading, spelling, and arithmetic in order to gauge improvement.
- (d) follow-up and consult with teachers on the progress and program of each child.
- (e) compare the improvement of those children with learning disabilities with the rest of their classmates.

Following is the method by which the information needed to support the direction of the study.

- A. A form was developed which surveyed the developmental stages of the children studied from birth to the present. This form included such information as prenatal health of mother, nutrition, birth of child, length and condition of stay in hospital, feeding habits, growth rate, illness, ages of grasping, sitting, crawling, first words, walking, throwing, first sentences, toilet training, etc.
- B. A second form was developed to interview the parent to gather information regarding:
 - Siblings: number of children in family, ages, birth order, etc.
 - Marital Status of Family: two parents, one parent, etc.
 - Social Status: entertainment styles, activities, vacations, etc.
 - Economic Status: financial income, job status, one or two parents working.
 - Mobility: how often has family moved and any other environmental factors that could have influenced the child's development.

- C. A battery of tests was given to each child to describe his or her learning disability in behavioural terms related to educational goals.

The instruments which were given were:

1. Wide Range Achievement Test (WRAT) to provide a grade level in reading, spelling and arithmetic.
 2. Wechsler Intelligence Scale for Children (WISC) to provide an individual test of intelligence.
 3. Illinois Test of Psycholinguistic Abilities (ITPA) to delineate specific abilities and disabilities of children in order that remediation may be undertaken where needed.
- D. An individual remedial program was designed to treat the learning difficulties of each subject.
- E. The WRAT was given to a random sample of twenty Grade Two pupils to provide an entering score in reading, spelling, and arithmetic.
- F. Those teachers working with the subject filled out weekly work cards reporting the child's progress in the remedial program.
- G. At the end of the experimental period, the WRAT was readministered to all pupils involved in the study to determine whether any improvement occurred during the school year.

IMPLICATIONS

School counsellors, school psychologists, teachers and administrators frequently diagnose children and on this basis make special class or program placements. However, it often happens that these children are not adequately followed up to determine whether progress is made

during the school year. This approach leaves the counsellor, psychologist, teacher or administrator with little empirical data to support the diagnosis and treatment of such children; and hence little reason to continue this approach to the assessment and treatment of children with learning difficulties. In the meantime, the child is left completely out of the picture, as often are his parents. The child may not make any progress because a detailed assessment of his or her areas of difficulty is lacking. It is only on the basis of an adequate diagnosis that an adequate remediation program can be designed and evaluated. Subsequently, the child must be followed up to determine the adequacy of the program. Often a child is labelled as learning disabled, when in reality he may have a learning gap or some minor physical defect that can be treated and render him capable of functioning at a higher level.

The pre-school development of a child's life could handicap his academic learning in the early years of schooling. Perhaps educators should be concerned with developing a detailed data sheet on each child prior to entering school and plan the first few years of schooling around this information.

THE RESEARCH INSTRUMENTS

The basic instruments used in this study were:

1. The Wechsler Intelligence Scale for Children (WISC)
2. The Illinois Test of Psycholinguistic Ability (ITPA)
3. The Wide Range Achievement Test (WRAT)
4. The Bender Visual Motor Gestalt Test (BVMGT).

The Wechsler Intelligence Scale for Children (WISC)

This testing device has grown logically out of the Wechsler-Bellevue Intelligence Scales used with adolescents and adults (Wechsler, 1944). The Wechsler-Bellevue Intelligence Scale was developed by David Wechsler who operationally defines intelligence as "the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment" (p. 7). In brief, "intelligence is part of a larger whole, namely personality itself. The theory underlying the WISC is that intelligence cannot be separated from the rest of the personality, and a deliberate attempt has been made to take into account other factors which contribute to the total effective intelligence of the individual." (p. 5).

Adams (1964) claimed that the WISC has a broader range of tasks than the Stanford-Binet because Wechsler selected items that represent different types of intellectual performance. The items of a given type, arranged in increasing order of difficulty make up subtests grouped into 'verbal' and 'performance'.

In constructing the WISC tables, the test scores were equated against a set mean IQ of 100 and a SD of 15 IQ points. In terms of percentile limits, the highest one percent will have an IQ of 135 and above, and the lowest one percent an IQ of 65 and below. The middle fifty percent of children at each age will have IQs from 90 to 110. The WISC is designed to measure the IQs of individuals 5 years through to 15 years 11 months.

Generally, the WISC is considered one of the best intelligence tests for youngsters aged eight to thirteen (Cohen, 1959). Many

writers (Adams, 1964; Anastasi, 1969; Brown, 1970; Dubois, 1970; Glasser and Zimmerman, 1968; Horst, 1966; Tyler, 1963) expressed the same view as Mehrens and Lehmann (1969), who claimed that the WISC is a good test instrument.

The Wide Range Achievement Test (WRAT)

This test was first standardized in 1936 as a convenient tool for the study of the basic school subjects of reading (word recognition and pronunciation), written spelling, and arithmetic computation by its authors J.F. Jostok and S.R. Jostok.

The 1965 edition was used and each subtest is divided into two levels, I and II. Level I is designed for use with children between the ages of 5 years through to 11 years 11 months. Level II is intended for persons from 12 years through to adulthood.

"The method of measuring the basic subjects was advisedly chosen to achieve the following ends: (1) to study the sensory-motor skills involved in learning to read, spell, write and figure, (2) to provide simple and homogeneous content, (3) to avoid duplication and overlapping with tests of comprehension, judgment, reasoning, and generalization studied by means other than reading, spelling, and arithmetic, (4) to free diagnostic inferences from common confusions due to operational semantics, (5) to permit validity analyses by the method of internal consistency." (p. 1).

The WRAT standard score has a mean of 100 and a standard deviation of 15. It is statistically comparable to IQs obtained from the Wechsler Scales (WAIS and WISC) and partly also to IQs from the New Stanford-Binet (Form L-M) which has a standard deviation of 16.

This particular instrument was chosen on the basis of the age group represented in the school and the vast amount of research that indicates a fairly high reliability co-efficient.

The Bender Visual Motor Gestalt Test (BVMGT)

This test originally was assembled by Lauretta Bender (1938) for the purpose of providing an index of perceptual motor maturation. She believed that measurement of this type of maturation could be accomplished by the use of patterns with different degrees of complexity and organizational principles. She found such patterns in the work of Max Wertheimer and from his assortment of thirty or more designs Bender selected nine.

These patterns with their varied contours, degrees of complexity, and line qualities have been used in series to study the integrative state of the organism at different levels of maturation and in different organic and functional disorders. The BVMGT with children has been related to learning problems (Baldwin, 1950; De Hirsch, 1954; Fabian, 1945; Fabian, 1951; Koppitz, 1958a, Koppitz, 1959; Lachman, 1960).

The Illinois Tests of Psycholinguistic Ability

Attempts by John N. Paraskevopoulos and Samuel A. Kirk to develop a comprehensive diagnostic test for pre-school children began in 1951 and by 1961 an experimental edition of the ITPA resulted. Subsequent summaries of research by Bateman (1965) and Kirk (1966) indicated that the test was valuable enough to warrant certain modifications and improvements. Work was begun and the results of this effort were published as the 1968 revised edition of the ITPA.

The psycholinguistic model on which the ITPA is based attempts to relate those functions whereby the intentions of one individual are

transmitted (verbally or nonverbally) to another individual, and, reciprocally, functions whereby the environment or the intentions of another individual are received and interpreted. It attempts to interrelate the processes which take place, for example, when one person receives a message, interprets it, or becomes the source of a new signal to be transmitted. It deals with psychological functions of the individual which operate in communication activities.

The twelve subtests are designed to isolate abilities in (a) three processes of communication, (b) two levels of language organization, and/or (c) two channels of language input and output. Performance on specific subtests of this battery should aid in pinpointing specific psycholinguistic abilities and disabilities. The identification of specific deficiencies in psycholinguistic functions leads to the crucial task of remediation directed to the specific areas of defective learning.

The ten subtests used to diagnose the subjects are described and presented in the two levels of organization, representational level, and the automatic level.

Functions Tested at the Representational Level.

- A. The Receptive Process (Decoding): assesses the child's ability to comprehend visual and auditory symbols.

Auditory Reception: this is a test to assess the child's ability to derive meaning from verbally presented material.

Visual Reception: this is a measure of the child's ability to gain meaning from visual symbols.

- B. The Organizing Process (Association): At the representational level

the organizing process is represented by the ability to relate, organize, and manipulate visual or auditory symbols in a meaningful way.

Auditory Association: this test taps the child's ability to relate concepts presented orally.

Visual Association: the organizing process in this channel is tapped by a picture association test with which to assess the child's ability to relate concepts presented visually.

- C. The Expressive Process (Encoding): This process involves the child's ability to use verbal or manual symbols to express an idea.

Verbal Expression: this test is to assess the ability of the child to express his own concepts vocally.

Manual Expression: this test taps the child's ability to express ideas manually.

Functions Tested at the Automatic Level.

The following subtests are basically "whole level" tests which measure the child's ability to perform nonsymbolic tasks.

- A. Closure: assesses the child's ability to fill in the missing parts in an incomplete picture or verbal expression or the ability to integrate discrete units into a whole.

Grammatical Closure: assesses the child's ability to make use of the redundancies of oral language in acquiring automatic habits for handling syntax and grammatical inflections.

Visual Closure: assesses the child's ability to identify a common object from an incomplete visual presentation.

- B. Sequential Memory: The two following tests assess the child's ability to reproduce a sequence of auditory or visual stimuli.

Auditory Sequential Memory: assesses the child's ability to reproduce from memory sequences of digits increasing in length from two to eight digits.

Visual Sequential Memory: assesses the child's ability to reproduce sequences of nonmeaningful figures from memory.

CHAPTER II

BACKGROUND INFORMATION

1. School Careers

This is tabulated in Table 1. It shows that the subjects ranged in age from 6 years 6 months to 6 years 11 months. The average age, based on their ages as of September, 1973, was 6 years 7 months.

All the subjects had spent at least one full year or ten months in school before entering the decellerated program. Various administrative and teaching devices employed pointed to the fact that they were not progressing as effectively as expected relative to their innate potential.

2. Referral Problems

The primary reason for the referral of all subjects to the school counsellor was difficulties which were hampering their school progress. The records indicated that all subjects had difficulty from the time they entered school.

In three cases the referral stated that behavior problems were beginning to accompany their learning difficulties. The problems mentioned were: immaturity in monitoring their behavioral and emotional responses to other children; their inattentiveness and lack of concentration, and signs of tension and lack of interest. No subject had problems that warranted the attention of a psychiatrist.

3. Family Background Information

This section includes information about (a) the occupation of the

TABLE 1
BACKGROUND INFORMATION ON SUBJECTS: SCHOOL CAREERS

Subject	V	IQ (WISC) P	F	CA September, 1973	Grade September, 1973	Achievement Metropolitan September, 1973 % rank	No. of years in school before entering remedial program
Gary H.	106	122	115	6-8	2	46	1
Clayton T.	97	121	109	6-0	2	61	1
Diane A.	87	97	91	6-11	1-2	44	1
Michele T.	103	115	109	6-9	1-2	38	1
Average							

Achievement Level: obtained by their Metropolitan Achievement Test administered in September, 1973,
reported in percentile rank.

TABLE 2A
OCCUPATION OF FATHER

Occupation	Number
Professional	0
Business Executives	0
Supervisor/Managerial	1
Sales or Skilled	3
Semiskilled or Unskilled	0

TABLE 2B
OCCUPATION OF MOTHER

Occupation	Number
Professional	0
Business Executives	0
Supervisor/Managerial	1
Sales or Skilled	0
Semiskilled or Unskilled	2
Housewife	1

TABLE 3A
FAMILY STRUCTURE

Parents	Number
Natural	3
Ward	0
Adoption	0
Father only	0
Mother only	0
Second Marriage	1

TABLE 3B
FAMILY STRUCTURE

Number of Siblings	Number
Only child	3
One sibling	0
Two siblings	1
Three siblings	0
Four siblings	0

TABLE 4
FAMILY MEDICAL HISTORY

Family history	Number
Alcohol	1
Migraine	0
Epilepsy or Convulsions	0
Allergies	0
Retardation	1
Blindness or Squint	0
Neurological Disease	0
Mental Illness	1
T.B.	0
Left-handedness	2
Early Deafness	0

father (Table 2A), (b) the occupation of the mother (Table 2B) and (c) family structure (Table 3A and 3B).

(a), (b): Occupation: In terms of occupation of the father and the mother, all subjects came from middle and lower middle class families.

(c): Family Structure: Table 3A and 3B show that all subjects were living with both their natural parents or at least one natural parent. Three of the children were an only child and one was the oldest of two children.

4. Medical History

a) Family

This was obtained by the Parent Form (Appendix A) and Identifying Information Form (Appendix B). The significant information in regard to certain physical and psychiatric factors in the family is tabulated in Table 4.

The significant information in regard to certain physical and psychiatric factors of the subjects is tabulated in Table 5.

5. Intelligence Test Scores

Table 6 shows that three subjects were within the average range of mental ability and one subject was within the bright normal range of mental ability.

TABLE 5
MEDICAL HISTORY OF THE SUBJECTS

A. Prenatal History	Number
Prior Caesarian Uterine Operations	0
Seven or more Pregnancies	0
Blood Incompatibility	0
Toxemia	0
Bleeding	0
Infections	1
Smoking	1
X-Rays	1
B. Birth and Newborn	Number
Induced	2
Prematurity/Post maturity	1
Abnormal Presentation	0
Jaundice	0
Anoxia	0
Prolonged Labour	0
Prolonged Rupture of Membranes	0
Precipitate Labour	0
Transfused	0
Incubator	1
Discharged Mother	1
Genetic Defect Malformation	0
C. Abnormalities in the Developmental Milestones	Number
Feeding	1
Crawling	2
Walking	0

Table 5 Continued.

C. Abnormalities in the Developmental Milestones	Number
Talking	0
Toilet Training	2
D. Childhood Diseases	Number
Chicken Pox	1
Rubella	1
Rubeola	0
Mumps	0
Scarlet Fever	0
Innoculation/Vaccine Reaction	0
Tonsillitis	2
E. Health	Number
Encephal/Men	0
Pneum/Broncia	1
Croup	2
E.E.G.	0
Head Banging	0
Sleep	3
Eating	2
Toxic Agents	0
Motor Dysfunction	0
Infections/Fevers	3
Sensory Dysfunctions: Sight - 1; Hearing - 0	0

TABLE 6
INTELLIGENCE TEST SCORES (WISC)

Intellectual Classification	IQ range	Number
Dull Normal	80 - 89	0
Average	90 - 100	3
Bright Normal	110 - 119	1

CHAPTER III

CASE 1: MICHELE T.

Michele was a girl of slight build with a fine skeletal development. She was 51 inches tall and weighed 46 pounds. Her complexion was very fair and her hair was light brownish in color.

Michele was viewed by her parents as co-operative in that she waited her turn and was willing to help. This was considered average for her age and grade level. Her attention span was poor in that she rarely listened attentively and was easily distracted. Michele had some difficulties relating with her peers, and usually withdrew or became aggressive if she did not get what she wanted. Michele was an only child and had spent the majority of her early years relating to adults. Michele was seen as a girl who had below average tactfulness in that her social behavior was quite often inappropriate. When approaching new situations such as parties, trips, or any changes in routine, Michele had difficulty adapting.

Michele was born on December 29, 1966 in the Royal Alex Hospital in Edmonton, Alberta. She weighed 5 pounds at birth and her height at birth was 16 inches. Her mother, Mrs. T., experienced a fair prenatal health period with some difficulties with tension. Mrs. T. was assisted by an obstetrician and remained in the hospital for 15 days while Michele was on the premature ward.

Upon arriving home with Michele, Mr. and Mrs. T. reported difficulty in the feeding and sleeping routine of Michele. It seemed that Michele's prematurity had resulted in sensitivity to the types of

food she would take and how she was fed. She also had a difficult time sleeping at all times.

Health History

At the age of 6 months and again at 2 years, Michele had ear infections that required penicillin to clear. Due to frequent colds and sore throats, it was decided that Michele's tonsils should be removed. Michele was 3 years old when she was hospitalized for a tonsillectomy. She was hospitalized again when she was 5 years old for pneumonia.

Michele's doctor referred her to a dentist because her teeth appeared not to be calcifying properly. At the age of 4 years, Michele went to the dentist to have this problem treated.

During the first six months, Michele was slow gaining weight and height compared to other children of her age. She was able to sit up by herself with little support at the age of 5½ months. Michele did not crawl using all four limbs but rather slid herself along on the floor. Michele was able to pull herself into a standing position at 1 year of age and was attempting to move around without support in that same month.

Michele was starting to speak her first words by the time she was 9 months old and started to increase her vocabulary from one syllable words to two or three syllable words by the time she was 11 months of age. By the time Michele was 1 and one-half years of age she was speaking in sentences and was capable of holding a conversation for a short period of time.

Michele was described as a very active girl who quite often bit

her nails and became verbally quiet. She started to be toilet trained at 1 year and 6 months but experienced difficulties and quite often day and night wetted herself. Michele was completely toilet trained by the time she was 3 years of age.

The family had been relatively mobile having moved to a new district in July 1968, August 1968, October 1968 and April 1973. They had been home owners for 1 year and 6 months prior to the research and planned to settle in their present location.

There was a family history of allergies to hay and flowers which was sometimes compounded into asthma.

Mrs. T. had been under emotional stress for three years and had been hospitalized for this condition seven times during this period. Mr. T. reported that he was in good health and had been since birth.

Parents and Family Background

Mr. and Mrs. T. were local Albertans and had received all of their formal schooling in or around the Edmonton area. Michele's father was 34 years of age and had completed his grade 12 matriculation. He was working as an office manager for Imperial Oil Ltd. and had worked for them for 17 years in different capacities. Mrs. T. was 29 years of age and had a grade 11 education and key punch course. She worked as a key punch operator from 8:00 a.m. to 4:30 p.m. daily for 2½ years after Michele was born. She then changed to a part-time evening job from 3:15 until 10:00 p.m. In May of 1973 Mrs. T. decided to stay home full time and it was her intention to continue to do so for several years.

Social Activities of Parents

Mr. and Mrs. T. had not entertained socially for three years because

of Mrs. T.'s unstable emotional state. She had been in and out of the hospital which had caused them to restrict their social activities to in-laws and a very few close friends.

The only holiday was when Mrs. T. was in the hospital and Mr. T. took Michele to Vancouver and Victoria, British Columbia for three weeks. Mrs. T. liked to do arts and crafts, writing, drawing and games with Michele when she was able to cope.

School Experience

Michele attended a private playschool day care center for one year. Her worker described her as a girl who seemed very moody and sensitive. She was co-operative if she was not asked to produce and became very withdrawn if pressured. Michele chose to play alone and did not interact very well in large groups.

Upon entering grade one in September of 1972, Michele was placed in a readiness class in a City of Edmonton Public School. Here she was encouraged to work at her own pace and to interact with children of her own age. The main objectives of the readiness program were to increase her word recognition skills, her listening skills, and her knowledge of numbers and the alphabet. When the family moved to Sherwood Park in April 1973, Michele was placed in a regular grade one class.

Upon entering grade one in September 1972, Michele was administered the following entrance test:

Metropolitan Readiness Test

September, 1972

<u>Test</u>	<u>Total Score</u>	<u>Raw Score</u>
Word Meaning	16	7

<u>Test</u>	<u>Total Score</u>	<u>Raw Score</u>
Listening	16	4
Matching	14	5
Alphabet	15	7
Numbers	26	8
Copying	14	10
	Total	41

Percentile Ranking 38%

Letter Rating C

The results of the test indicated that Michele was having some auditory difficulty that could have been due to inattentiveness or to undeveloped auditory skills. She was also low in matching and copying, possibly due to a weakness in visual perception, or to poor auditory skills which were causing her to miss pertinent information.

The following tests were administered at the end of the 1972/1973 school year:

Otis-Lennon Mental Ability Test

May 8, 1973

Chronological Age 6 years 5 months

Performance by Age

D.I.Q. 88

Percentile Rank 23

Stanine 4

Mental Age 5 years 6 months

Performance by Grade

Percentile Rank 9

Stanine 2

Metropolitan Achievement Test

May 15, 1973

<u>Test</u>	<u>Raw Score</u>	<u>Standard Score</u>	<u>Grade Equivalent</u>	<u>%</u>	<u>Stanine</u>
1. Word Knowledge	16	31	1.4	22	3
2. Word Analysis	27	37	1.8	46	5
3. Reading	24	42	2.2	62	6
1 & 3 Reading Total	40	38	2.1	42	5
4. Total Mathematics	25	32	1.3	16	3

Michele received the following year end letter gradings for her first year in school:

Reading	C-
Language	C
Spelling	D
Arithmetic	D

Upon completion of grade one it was apparent that Michele lacked too many of the basic school skills to achieve success in grade two. It was recommended that she be placed in a split one-two classroom to enable her to learn those skills missed in grade one.

In the fall of 1973, Michele was given a psychological assessment to determine her learning abilities as well as her learning deficiencies so an adequate remedial program could be set up.

Wechsler Intelligence Scale for Children (WISC)

September 29, 1973

<u>Verbal Tests</u>	<u>Raw Score</u>	<u>Scaled Score</u>
Information	8	11

<u>Verbal Tests</u>	<u>Raw Score</u>	<u>Scaled Score</u>
Comprehension	6	9
Arithmetic	5	10
Similarities	3	7
Digit Span	10	15
Sum of Verbal Tests	<u>52</u>	

<u>Performance Tests</u>		
Picture Completion	7	10
Picture Arrangement	20	13
Block Design	6	11
Object Assembly	17	12
Coding	46	15
Sum of Performance Tests	<u>61</u>	

Verbal Scale IQ	103
Performance Scale IQ	115
Full Scale IQ	109

Illinois Test of Psycholinguistic Abilities (ITPA)

Psycholinguistic Age	7-4
Mental Age	7-6
Chronological Age	6-11
Mean	37.1

<u>Auditory Vocal Test</u>	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Auditory Reception	31	7-3	39
Auditory Association	18	5-5	26
Verbal Expression	38	9-10	46
Auditory Sequential Memory	38	10-3	49

<u>Auditory Vocal Test</u>	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Grammatical Closure	20	6-8	37
<u>Visual Motor Tests</u>			
Visual Reception	12	4-10	26
Visual Association	19	5-9	30
Manual Expression	27	8-4	40
Visual Closure	31	9-0	47
Visual Sequential Memory	16	5-10	31
<u>Representational Level</u>			
Reception:			
Auditory	31	7-3	39
Visual	12	4-10	26
Association:			
Auditory	18	5-5	26
Visual	19	5-9	30
Expression:			
Visual	38	9-10	46
Manual	27	8-4	40
<u>Automatic Level</u>			
Closure:			
Grammatical	20	6-8	37
Visual	31	9-0	47
Sequential Memory:			
Auditory	38	10-3	49
Visual	16	5-10	31
Representational Level	24	6-11	34
Automatic Level	26	7-11	41

	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Auditory-Vocal	29	7-11	39
Visual-Motor	21	6-9	35

Wide Range Achievement Test (WRAT)

September 29, 1974

<u>Test</u>	<u>Raw Score</u>	<u>Grade Score</u>
Reading	31	1.5
Spelling	22	1.4
Arithmetic	13	kg .6

Bender Visual-Motor Gestalt Test

Raw score of 9.

Sources of error:	rotation	- 2
	integration	- 4
	distortion of shape	- 3
	Perseveration	- 0

Interpretation of Test Results

The psychometric rating as determined by the WISC places Michele within the average range of mental ability. These findings would indicate that Michele should have little problem learning grade two material barring any unknown factors. Her major area of weakness appeared to be her inability to use common sense and to be a logical and abstract thinker.

At the time the ITPA was given, Michele's chronological age was 6 years 11 months. Her other developmental ages, the P.L.A. and her M.A., were not far from this but looking at the subtest profile there are obvious discrepancies among the subtests. It can be noted from

are obvious discrepancies among the subtests. It can be noted from the ITPA results that (a) there is no real significant difference between the representational and automatic levels, (b) there is a slight significant difference between the overall visual-motor and auditory-vocal channels, and (c) there is a significant difference between the psycholinguistic processes. The reception process is 3 years 1 month below the expression process and the association process is 3 years 6 months below the expressive process. These two processes, the reception and association, are approximately 1 year 6 months below the composite P.L.A. Although not all of the reception or association subtest scores are significantly low, they are all below the overall expressive counterparts. It appeared that Michele was deficient in the visual and auditory association channel functions and a program to ameliorate these processes was needed along with some visual reception training.

A raw error score of 9 on the BVMGT supported the need for a visual association and reception program. Michele's sources of error were mainly in perceiving the figures incorrectly and undeveloped work attack skills.

Remedial Program

The main objective of the remedial program was to give Michele enough success that she could gain confidence and use her natural potential more fully:

1. to increase Michele's auditory association,
2. to increase Michele's visual association,
- and 3. to increase Michele's visual reception.

CHAPTER IV

CASE 2: CLAYTON T.

Clayton was a boy with a very sturdy build with heavy skeletal development. He was 53 inches tall and weighed 68 pounds. His complexion was dark and his hair light brown in color and of a coarse texture.

Clayton was viewed by his parents as a boy who rarely listened and whose attention frequently wandered. With his short attention span, he was often disorganized in his manner of working, inexact and careless. Clayton frequently demanded attention by speaking out of turn, making loud noises or yelling. He was socially avoided by others to some degree, because of his rough house manner of play and his methods of achieving attention. Clayton avoided responsibility in that he had limited acceptance of role for his age and had difficulty when approaching certain new situations. He could become overactive and excitable, reverting back to his rough house tactics to gain attention. Clayton was seen as an above average learner in the activities in which he engaged.

Clayton was born on September 1, 1967 in the Royal Alex Hospital in Edmonton, Alberta. He weighed eight pounds nine ounces at birth and his height was 23 inches. Clayton's mother experienced an excellent prenatal period and had no problems or difficulties during the pregnancy or delivery. She was assisted by her obstetrician and stayed in the hospital for five days. Clayton's parents experienced no abnormal difficulties with him in the areas of feeding or sleeping upon their arrival at home.

Health History

Clayton gained weight and height according to charts for his age group and was able to sit by himself at seven months. Clayton was not an average crawler in that he did not use all four limbs to propel himself. Instead he used his arms and pulled himself along with little or no use of his legs (knees). Clayton was able to pull himself into a standing position at nine months of age and was attempting his first self-walking motions at ten months of age. At the age of eleven months Clayton was able to walk around with little or no usage of supports. Clayton first started to use words at fourteen months and within four months had increased his vocabulary from one syllable words to two and three syllable words.

According to his mother, Clayton was clumsy in his attempts to walk and run and his eye-hand co-ordination seemed poor. His mother described his toilet training as a nightmare in that Clayton did the opposite of what he was asked and continued to regularly night wet and day wet until he was three and one-half years old. He was a very active boy to the point that his parents had him checked for hyperactivity by their family doctor. The doctor suggested that the boy was active but not overly so and they should try to engage in some constructive play that would allow him to burn off his energy. The parents reported that they tried this but he repeatedly became overactive and disobedient and they discontinued rough house play with him.

At the age of four, Clayton was admitted to the University of Alberta Hospital to have his tonsils removed because of continuous colds and slight ear infections. A playmate of Clayton's hit him on the head with a piece of pipe and he required six stitches to repair the wound.

Six months later, at the age of six years, Clayton fell while playing and seven stitches were required to repair the damage to his right knee. The tonsillitis operation was the only hospitalization Clayton had been involved in up to the time of this research.

Parents and Family Background

Clayton's parents were both local Albertans and had received all of their education in Edmonton. Clayton's father was twenty-seven years of age and his last completed school grade was eleven. Clayton's mother was twenty-six years of age and completed a grade twelve diploma program. Clayton's father was employed by Silverwood Dairies as a country sales representative and had worked for this company for nine years in different job capacities. Mrs. T. was employed by Burger King Ltd. as a unit manageress and had worked for Burger King Ltd. for seven years at various job capacities.

The family had been relatively immobile in eight years of marriage, moving from an apartment to their own home in 1971 and then another move in 1972 to a larger more expensive home at their present address. Mr. and Mrs. T. reported that they were in good health and there was no family history of any major health problems.

Social Activities of Parents and Family

The T's were quite active in social entertainment with other couples of their social and economic status. The family took a two to three week vacation every year to visit relatives, or to go camping with a group of friends to a lake or to the mountains.

The major family recreation activities included bowling throughout the year, skating and tobogganing in winter, with camping and

sight seeing being their major source of activity in the warmer months. Clayton's mother and dad read to him and were playing quiet games such as cards, checkers, monopoly, and sorry.

School Experience

Clayton was unable to attend a playschool or kindergarten because the opportunity was unavailable at the time or the distance was too great. Mr. and Mrs. T. both worked and had sent Clayton to a babysitter since he was four months old. His parents, with the aid of the babysitters, took on the responsibility of teaching him his alphabet, his numbers and initial word recognition skills.

Upon entering grade one in the September of 1972 Clayton was administered the Metropolitan Readiness Tests with the following results:

Metropolitan Readiness Test

September, 1972

<u>Test</u>	<u>Total Score</u>	<u>Raw Score</u>
Word Meaning	16	9
Listening	16	10
Matching	14	8
Alphabet	15	14
Numbers	26	11
Copying	14	9
	Total	<u>61</u>

Percentile Ranking 61%

Letter Rating C

The results of the test indicated that Clayton had an overall average ability but the individual scores indicated some possible difficulties

or learning deficits. These learning deficits could have been due to his lack of experience with these types of learning tasks or an inattentiveness, and undeveloped skills related to school tasks. The lower scores on matching and copying could have been due to weakness in visual perception or his low ability to pay attention and concentrate.

Throughout the first year of school Clayton had difficulty with his counting and word recognition skills. The teachers described him as being unco-operative and somewhat disobedient. He rarely listened attentively and frequently demanded attention by speaking out of turn or making loud noises.

Clayton had a hard time relating to his classmates due to his rough house style of relating and his aggressive physical attacks when he did not get his way.

At the end of that school year the Otis-Lennon Ability Test was administered on May 8, 1973, with the following results:

Otis-Lennon Mental Ability Test

May 8, 1973

Chronological Age	6 years 8 months
Performance by Age	
D.I.Q.	103
Percentile Rank	57
Stanine	5
Mental Age	6 years 7 months
Performance by Grade	
Percentile Rank	35
Stanine	5

The Metropolitan Achievement Test was administered on May 15, 1973 with the following results:

Metropolitan Achievement Test

May 15, 1973

<u>Test</u>	<u>Raw Score</u>	<u>Standard Score</u>	<u>Grade Equivalent</u>	<u>%</u>	<u>Stanine</u>
1. Word Knowledge	23	40	1.8	46	5
2. Word Analysis	32	41	1.9	68	6
3. Reading	12	29	1.3	16	3
1 & 3 reading	35	35	1.6	32	4
4. Total Mathematics	19	29	1.2	10	2

Clayton received the following year end grading for his first year of school:

Reading	C+
Language	C
Arithmetic	C

Upon completion of grade one it was decided by the teachers and administration that Clayton would benefit from a program that stressed repetition of some grade one skills and a slow approach to new materials and concepts.

In the fall of 1973 Clayton was given a complete psychological assessment, to provide further information for setting up a remedial program that could provide him with enough skills to gain success in his future school learning and relating with his peers.

Wechsler Intelligence Scale for Children (WISC)

September 29, 1973

<u>Verbal Tests</u>	<u>Raw Score</u>	<u>Scaled Score</u>
Information	6	7*
Comprehension	5	8*
Arithmetic	5	10
Similarities	5	10
Digit Span	9	13
Sum of Verbal Tests	<u>48</u>	

<u>Performance Tests</u>		
Picture Completion	7	10
Picture Arrangement	24	14
Block Design	14	14
Object Assembly	22	15
Coding	40	12
Sum of Performance Tests	<u>65</u>	

Verbal Scale IQ 97

Performance Scale IQ 121

Full Scale IQ 109

Average range of mental ability.

Illinois Test of Psycholinguistic Abilities (ITPA)

Psycholinguistic Age	7-4
Mental Age	7-6
Chronological Age	7-1
Mean	38.5

<u>Auditory Vocal Tests</u>	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Auditory Reception	39	9-6	47
Auditory Association	29	8-3	44
Verbal Expression	19	5-8	30
Auditory Sequential Memory	23	6-3	34
Grammatic Closure	23	7-7	41
<u>Visual Motor Tests</u>			
Visual Reception	24	7-4	39
Visual Association	21	6-3	34
Manual Expression	31	10-4	44
Visual Closure	25	7-6	39
Visual Sequential Memory	17	6-2	33
<u>Representational Level</u>			
Reception:			
Auditory	39	9-6	47
Visual	24	7-4	39
Association:			
Auditory	29	8-3	44
Visual	21	6-3	34
Expression:			
Verbal	19	5-8	30
Manual	31	10-4	44
Closure:			
Grammatic	23	7-7	41
Visual	25	7-6	39
Sequential Memory:			
Auditory	23	6-3	34

	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Visual	17	6-2	33
Representational Level	27	7-10	40
Automatic Level	22	6-10	38
Auditory-Vocal	26	7-5	39
Visual-Motor	23	7-6	38

Wide Range Achievement Test (WRAT)

September 29, 1973

<u>Test</u>	<u>Raw Score</u>	<u>Grade</u>
Reading	40	2.1
Spelling	26	1.8
Arithmetic	19	1.6

Bender Visual-Motor Gestalt Test

Raw score of 6

Sources of error: rotation -2
 integration -0
 distortion of shape -2
 perseveration -2

- visual-motor perception maturation age level of 6-6 to 6-11

- school placement of grade .5

Interpretation of Test Results and How They Relate to Clayton's

Learning Process

The psychometric results as determined by the WISC put Clayton within the average range of mental ability. These results also indicate a significant 24 point discrepancy between his verbal and performance IQ. His difficulties on the verbal subtests seem to relate to

inadequate language development, particularly expressive language. The low results from the WRAT also support his poor performance on academic tasks whereas his performance IQ would indicate that Clayton has the potential to be a high calibre academic student.

At the time the ITPA was given, Clayton's chronological age was 7 years 1 month. His developmental ages were not far from this but looking at the profile subtest scores there are some obvious discrepancies among the subtests. These low points occur in tests having to do with visual-motor, or auditory-vocal tasks. It will be noted from the ITPA test results that (a) there are no significant differences among the psycholinguistic processes, (b) there are no significant differences between the representational and automatic levels of organization, and (c) there is no overall significant difference between the visual-motor and auditory-focal channels. The main discrepancies appear in the individual subtests, as with verbal expression which is 1 year and 6 months below the overall P.L.A. score, indicating a major weakness. Clayton's auditory sequential memory, visual association and visual sequential memory are 1 year and 1 month below the P.L.A. score and indicate some difficulties with these processes.

These results support the WISC finding that indicated inadequate language development which would hinder his reading and spelling progresses. Remediation in expressive language and specific training to ameliorate the weak auditory memory and difficulty in the visual-motor channel was recommended.

A raw score of 6 errors on the Bender Visual Motor Gestalt Test is within the normal range for children in this age bracket and especially so for boys. Clayton's score was more indicative of his work attack

skills than any receptive or motoric expression difficulty. Clayton approached all tasks as a speed contest, no attention was paid to detail or overall completeness or correctness.

Remedial Program

The main objective was to encourage Clayton to become more expressive with his oral and written language. The following objectives were also programmed for:

1. to increase Clayton's auditory memory,
2. to increase Clayton's visual sequential memory,
- and 3. to increase Clayton's visual association channel.

CHAPTER V

CASE 3: DIANA A.

Diana was a pleasant looking young lady with dark brown hair and a ready smile at all times. Her body build would be described as stocky and somewhat plump with large bone structure. She weighed 63 pounds and was 52 inches tall.

Diana was viewed by her present parents as a very quiet little girl who enjoyed playing with her little people (plastic figures), doing puzzles, looking at books and generally spending time by herself. Diana was a very co-operative person in that she was very tactful in most situations and seemed to enjoy co-operating with everyone. Her parents said that Diana's attention was excellent when she was playing with her toys but in a new situation that required her to attend and concentrate she appeared to have some difficulty. She was quite organized in her play, looking for perfection, but her daily work plan was very unorganized and she rarely completed a task without adult intervention. Mr. and Mrs. A. reported that Diana was well liked by other children of her age in their community and was frequently invited over to play or had two or three of her friends over to their yard.

Background Information of Birth and Developmental Stages

Diana was born on the 20th day of November in the year 1966 at the Royal Alex Hospital in Edmonton, Alberta. Her weight at birth was 6 pounds and 9 ounces and her height at birth was 20 inches. Diana's mother, Mrs. A., experienced good prenatal health and had no difficulties during the pregnancy or the delivery process. She was assisted by

her obstetrician and stayed in the hospital for six days.

Diana was a model baby according to her mother in that she was easy to feed and after each feeding would sleep soundly for long periods of time. She gained weight and height well during her early months and seemed to be a very contented baby.

At the age of 4 months, Diana was able to sit up by herself for short periods of time and within one month she was attempting to crawl. Diana was using her four limbs to crawl around the house by the time she was 6 months old. She was able to walk around with little or no holding to furniture by her 10th month.

Diana started to increase her vocabulary from one syllable words to two or three syllable words by the time she was twelve months of age. Diana did not start to speak in complete sentences until she was 3 years of age and was able to hold a short conversation in her 42nd month.

Mrs. A. reported that Diana was such an obedient child that she was able to have her completely day toilet trained by the time she was 12 months old. Diana continued to night wet herself until she was in her 40th month.

Diana's health indicated that she went through the typical childhood diseases such as the chickenpox at 2, the measles at age 3 and a few bouts of mild croup. When Diana was 4 she entered the Royal Alex Hospital to have her tonsils removed hopefully to increase her immunity against frequent colds and mild ear infections. Diana had very large but very short teeth and she visited a dentist for the first time at the age of four. The dentist pulled some teeth to make room and built up some of the back teeth to ensure a proper bite.

Parents and Family Background

Mr. and Mrs. A. were both local Albertans and had received all of their formal education in the Alberta School System. Mr. A. was 30 years of age and had completed his Grade 12 matriculation. He apprenticed with Alberta Government Telephones and for 10 years had been employed as a Communication Technologist by them. Mrs. A. was 32 years of age and had completed her Grade 8. She was married and while pregnant with Diana was granted a divorce and lived by herself with her 3 children until she married Mr. A. one and one-half years prior to this research. When Diana was 1 year old Mrs. A. worked as a clerk in a department store and Diana was taken to a babysitter. Mrs. A. stayed at home for one year until Diana was 3 years of age then she returned to work in a grocery store and was still employed there at the time of the research.

The family had just bought a home and planned to remain in their present locale. Mr. and Mrs. A. both reported that they were in good health and there was no family history of any major health problems.

Social Activities of Parents and Family

Diana's parents were not involved in much social entertaining and rarely went to shows or dances. Mr. A. was involved in his company's curling and basketball league. The main family activity was skating and tobogganning. Mr. and Mrs. A. had not been on a vacation together but they hoped to spend two or three weeks at the lake with the children during the summer. It appeared very few games were played as a family unit and T.V. was the main source of entertainment.

School Experience

Diana did not attend kindergarten because there were only privately run kindergartens in the district. Mrs. A. required a daycare service to enable her to work and thus Diana did not enroll in a playschool or kindergarten situation.

Upon entering Grade One in September of 1972 Diana was administered the Metropolitan Readiness Test with the following results:

Metropolitan Readiness Test

September, 1972

<u>Test</u>	<u>Total Score</u>	<u>Raw Score</u>
Word Meaning	16	10
Listening	16	4
Matching	14	6
Alphabet	15	10
Numbers	26	12
Copying	14	9
Total		51

Percentile Ranking - 44%

Letter Rating - C

These results indicated that Diana was having some auditory difficulty that could have been due to inattentiveness or, undeveloped skills of sound discrimination that rely on past learning. She was also low in matching and copying which indicated a visual-perception deficiency or lack of experience.

Diana experienced some difficulty with the auditory channel and the visual channel, consequently doing poorly in reading and arithmetic. The teacher described Diana as a very quiet and withdrawn young girl who

worked quite hard if she was in small groups but would just sit when in the large group. Diana experienced a lot of difficulty in learning how to read and spell. Her teacher reported that Diana was very well-behaved and that she was well-liked by the other children in the class.

The Otis-Lennon Ability Test was administered on May 6, 1973 with the following results:

Otis-Lennon Mental Ability Test

May 6, 1973

Chronological age:	6 years 6 months
Performance by age	
D.I.Q.	96
Percentile Ranke	48
Stanine	5
Mental Age	6 years 3 months
Performance by Grade	
Percentile Rank	26
Stanine	4

Metropolitan Achievement Test

May 7, 1973

<u>Test</u>	<u>Raw Score</u>	<u>Standard Score</u>	<u>Grade Equivalent</u>	<u>%</u>	<u>Stanine</u>
1. Work Knowledge	12	27	1.3	12	3
2. Word Analysis	27	35	1.6	50	4
3. Reading	10	26	1.1	14	3
Test 1 and 3	22	26	1.1	12	3
4. Mathematics	21	29	1	13	2

Diana received the following year end letter gradings for her first complete year in school:

Reading C-
 Language C
 Arithmetic C

Upon completion of Grade One it was recommended that Diana be placed in an integrated Grade One-Grade Two classroom to better enhance her learning process.

In the fall of 1973, Diana was given a complete psychological assessment to provide her with a remedial program that would utilize her strengths to help remediate her difficulties.

Wechsler Intelligence Scale for Children (WISC)

September 28, 1973

<u>Verbal Tests</u>	<u>Raw Score</u>	<u>Scaled Score</u>
Information	7	9*
Comprehension	2	5*
Arithmetic	5	10
Similarities	3	7*
Digit Span	7	9

Sum of Verbal Tests 40

Performance Tests

Picture Completion	7	10
Picture Arrangement	5	7*
Block Design	6	11
Object Assembly	17	12
Coding	27	8

Sum of Performance Tests 48

Verbal Scale IQ	87
Performance Scale IQ	97
Full Scale IQ	91

Illinois Test of Psycholinguistic Abilities (ITPA)

October, 1973

Psycholinguistic Age	7.3
Mental Age	7.5
Chronological Age	6.11

<u>Auditory Vocal Tests</u>	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Auditory Reception	36	8-7	42
Auditory Association	27	7-8	39
Verbal Expression	22	6-2	32
Auditory Sequential Memory	18	5-0	29
Grammatical Closure	25	8-2	42

Visual Motor Tests

Visual Reception	23	7-1	36
Visual Association	22	6-6	33
Manual Expression	33	10-4	47
Visual Closure	20	6-4	32
Visual Sequential Memory	22	8-4	42

Reception

Auditory	36	8-7	42
Visual	23	7-1	36

Association

Auditory	27	7-8	39
Visual	22	6-6	33

<u>Expression</u>	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
<u>Expression</u>			
Verbal	22	6-2	32
Manual	33	10-4	47
<u>Closure</u>			
Grammatic	25	8-2	42
Visual	20	6-4	32
<u>Sequential Memory</u>			
Auditory	18	5-0	29
Visual	22	8-4	42
Representational Level	27	7-9	38
Automatic Level	21	6-11	36
Auditory-Vocal	26	7-1	37
Visual-Motor	24	7-8	38

Wide Range Achievement Test (WRAT)

<u>Test</u>	<u>Raw Score</u>	<u>Grade Score</u>
Reading	28	1.4
Spelling	15	Kg .7
Arithmetic	12	Kg .5

Bender Visual-Motor Gestalt Test

Raw Score of 11.

Visual-motor perception maturation age level of approximately 5-6 to 5-11

School placement would be kindergarten.

Sources of Error:	Rotation	2
	Integration	3

Distortion of Shape 3

Perseveration 3

Interpretation of Test Results

The psychometric results as determined by the WISC placed Diana within the average range of mental ability. Her difficulties on the verbal subtest seemed to relate to inadequate language development, particularly expressive language. Her low performance on picture arrangement indicated some lack of social awareness and perception of a sequential pattern. Diana's low achievement on the WRAT in the areas of reading and spelling supported the under developed language concept. In talking to Mrs. A. she stated that she only had a Grade eight education and probably had not provided a stimulating learning environment for her children.

Diana's raw score of 11 on the BVMGT was of the motoric reproduction part and this correlated highly with her difficulty in printing and copying design.

At the time the ITPA was given, Diana's chronological age was 6 years 11 months. Her other developmental ages, Psycholinguistic Age and Mental Age, were not far from this but looking at the profile subtest scores there were obvious discrepancies among the subtests. It will be noted from the ITPA test results that (a) there was no significant difference between the representational and automatic level, (b) there were no significant differences among the psycholinguistic processes, and (c) there were no significant differences between the overall visual-motor and auditory vocal channels.

The main discrepancies of the individual subtests as they compared to the overall Psycholinguistic Age were as follows: (a) Auditory

sequential memory was 2 years and 3 months below, (b) Verbal expression was 1 year and 1 month below, and (c) Visual Closure was 1 year below the Psycholinguistic Age.

These results indicated that the main areas of learning deficit were related to language development with both the expressive and receptive process involved. The receptive processes were the auditory sequential memory and the visual elements. The deficiency in the auditory channel needed a specific program to ameliorate this process along with some training in the visual closure and visual-sequential memory processes as well.

Remedial Program

The main objective was to get Diana to become more expressive with her oral and written communications. The following objectives were to support her language development program:

1. to increase Diana's auditory process.
2. to increase Diana's visual memory process.
3. to increase Diana's visual closure process.

CHAPTER VI
CASE 4: GARY H.

Gary was a boy of slight build with fine skeletal development. He was 52 inches tall and weighed 52 pounds. His complexion was fair and his hair light brown in color, with blond highlights.

Gary was viewed by his parents as co-operative in that he waited his turn. This would be considered average for his age and grade level. His attention span was poor in that he rarely listened and was easily distracted. Gary was socially accepted by his peer group, had a lot of friends and was frequently invited to their homes. When approaching new situations such as parties and trips, changes in routine, Gary adapted adequately for his age and grade level. Gary was seen as a boy who was above average in tactfulness, in that his behavior was rarely inappropriate socially.

Gary was born on January 8, 1967 in Whistin Hospital, England. He weighed 8 pounds 4 ounces at birth and his height was 21½ inches. His mother experienced good prenatal health and had no difficulties during the pregnancy or delivery. Gary's mother was assisted by a midwife and stayed in the hospital for eight days.

Upon arriving home from the hospital, Gary's parents experienced difficulties with him in the areas of feeding and sleeping. It seemed that Gary was a very fussy baby regarding the types of food he would take, the method of feeding and the length of time required for feeding. He had some difficulty settling down to sleep but once asleep slept soundly and for long periods of time.

Health History

At the age of 3 years, Gary had croup and pneumonia three times during the same year and was hospitalized each time. He was treated with penicillin each time. Gary had mild eye infections four times, which were treated primarily with penicillin. Other than the three hospitalizations in one year for croup and pneumonia, Gary had no major accidents that required medical attention or hospitalization.

Gary gained weight and height well during his early months and was able to sit by himself at five months. Gary refused to crawl and would sit in one spot or fuss and cry to be picked up and carried. Gary was able to pull himself into a standing position at seven months of age and was attempting his first walking steps at eight months of age. At the age of eight and one-half months Gary was able to walk around with little or no holding on to the furniture. Gary started to increase his vocabulary from one syllable words to two and three syllable words by the time he was twelve months of age. By the time Gary was two and one-half years of age he was speaking in sentences and was capable of holding a conversation for a short period of time.

Parents and Family Background

Gary's parents were both of English descent and received all of their education in England. Gary's father was thirty-nine years of age and was employed by a Canadian firm as a professional millwright and had worked at this profession for eleven years. Gary's mother was thirty-seven years of age and had been a housewife since her marriage fifteen years before.

The family have been relatively mobile in the six years prior to the research, having moved to a new district five times. They had been

home owners for three years and were quite certain that they would remain in their present location for some time. Both parents were in good health and there was no family history of any major health problems.

Social Activities of Parents and Family

Gary's parents were involved in social entertainment typical of couples of their social and economic status including: dancing, bowling, and movie-going. The family took an extended family vacation, three to four weeks each year, usually travelling to other provinces or countries. They frequently spent long week-ends travelling to the National and Provincial Parks. The major family recreation activities included swimming throughout the year, camping in the summer and skating in the winter. Gary and his dad played hockey and football together with his mother often joining in games such as checkers, sorry and cards.

School Experience

Gary was unable to attend kindergarten because the opportunity was unavailable in the district. Up until the time he started grade one, Gary's parents took on the responsibility of teaching him the alphabet, his numbers and initial reading skills.

Upon entering grade one in September of 1972 Gary was administered the Metropolitan Readiness Tests with the following results:

Metropolitan Readiness Test

September, 1972

<u>Test</u>	<u>Total Score</u>	<u>Raw Score</u>
Word meaning	16	10
Listening	16	4
Matching	14	4

<u>Test</u>	<u>Total Score</u>	<u>Raw Score</u>
Alphabet	15	12
Numbers	26	12
Copying	14	11
	Total	53
Percentile Ranking	46%	
Letter Rating	C	

The results of the test indicated that Gary was having some auditory difficulty that could have been due to inattentiveness, undeveloped skills of sound discrimination or difficulty remembering auditory sequences. He was also low in matching possibly due to a weakness in visual-perception or poor auditory skills which were causing him to miss information pertinent to the solution.

Throughout the first year of school Gary had difficulty with his auditory and visual skills consequently doing poorly in reading and arithmetic. The teachers described him as having a short attention span, as untidy in his printing, having difficulty transferring from the concrete to the abstract and reluctant to attempt harder work. He was, however, fairly well accepted by his fellow classmates.

The Otis-Lennon Mental Ability Test was administered on May 8, 1973 with the following results:

Otis-Lennon Mental Ability Test

May 8, 1973

Chronological Age	6 years 4 months
Performance by Age	
D.I.Q.	100
Percentile Rank	50

Stanine	5
Mental Age	6 years 5 months
Performance by Grade	
Percentile Rank	28
Stanine	4

Metropolitan Achievement Test

May 7, 1973

<u>Test</u>	<u>Raw Score</u>	<u>Standard Score</u>	<u>Grade Equivalent</u>	<u>%</u>	<u>Stanine</u>
1. Work Knowledge	13	28	1.3	12	3
2. Word Analysis	29	38	1.8	54	5
3. Reading	12	29	1.3	16	3
1 & 3 Reading	25	28	1.3	12	3
4. Mathematics	24	32	1.3	16	3

Gary received the following year end grading for his first year of school:

Reading	- B
Language	- C
Arithmetic	- C

Upon completion of grade one, it was decided by the teachers and administration that Gary would benefit from an integrated program in which he could repeat some of the grade one skills and continue at his own rate of learning in other subject areas.

In the fall of 1973, Gary was given a complete psychological assessment to provide further information. The results were as follows:

Wechsler Intelligence Scale for Children (WISC)

<u>Verbal Tests</u>	<u>Raw Score</u>	<u>Scaled Score</u>
Information	7	11
Comprehension	5	9
Arithmetic	5	12
Similarities	6	13
Digit Span	6	11

Sum of Verbal Tests 56Performance Tests

Picture Completion	8	13
Picture Arrangement	20	15
Block Design	6	12
Object Assembly	18	13
Coding	38	13

Sum of Performance Tests 66

Verbal Scale IQ	106
Performance Scale IQ	122
Full Scale IQ	115

Illinois Test of Psycholinguistic Abilities

Birthdate: January 8, 1967.

Psycholinguistic Age 6-8

Mental Age 6-9

Chronological Age 6-10

Mean 34.8

<u>Auditory Vocal Test</u>	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Auditory Reception	28	6-8	34
Auditory Association	21	6-8	36
Verbal Expression	30	7-8	38
Auditory Sequential Memory	19	5-3	40
Grammatical Closure	27	8-10	30
<u>Visual Motor Tests</u>			
Visual Reception	23	7-1	38
Visual Association	28	8-11	45
Manual Expression	27	8-4	40
Visual Closure	11	4-6	22
Visual Sequential Memory	9	4-1	18
<u>Representational Level</u>			
Reception:			
Auditory	28	6-8	36
Visual	23	7-1	38
Association:			
Auditory	21	6-0	38
Visual	28	8-11	45
Expression:			
Visual	30	7-8	40
Manual	27	8-4	40
<u>Automatic Level</u>			
Closure:			
Grammatical	27	8-10	48
Visual	11	4-6	22

	<u>Raw Score</u>	<u>Age Score</u>	<u>Scaled Score</u>
Sequential Memory:			
Auditory	19	5-3	30
Visual	9	4-1	18

Channels of Communication

Auditory-Vocal	6-10
Visual-Motor	6-7

Wide Range Achievement Test

<u>Test</u>	<u>Raw Score</u>	<u>Grade Score</u>
Reading	36	1.9
Spelling	25	1.7
Arithmetic	17	1.2

Bender Visual Motor Gestalt Test

Raw Score of 9 errors.

Source of errors: Rotation	- 2
Integration	- 3
Perseveration	- 1
Distortion of Shape	- 3

Visual-motor perception maturation age level of 6-6.5 years and a school grade placement of approximately grade one.

Interpretation of Test Results and How They Relate to Gary's Learning Process

Psychometric rating as determined by the Wechsler Intelligence Scale for Children placed Gary within the bright normal range of mental ability. These results indicated that Gary had the potential to be in

the top 25% of his class barring any learning disabilities.

At the time the ITPA was given, Gary's chronological age was 6 years 10 months. His other developmental ages were not far from this but looking at the profile subtest scores there are obvious discrepancies among the subtests. It will be noted from the comparisons above that (a) there are no significant differences among the psycholinguistic processes, (b) there is no significant difference between the overall visual-motor and auditory channels, but (c) there is a significant difference between the representational and automatic level. The automatic level is two years below showing a scaled score of 9 points below the representational level. Gary's major disabilities are in visual closure (4-6) visual memory (4-1) and auditory memory (5-3). These functions appear to be one and one-half years or more below the composite PLA. Although not all of the visual and motor tests are significantly low, they are all below the overall auditory counterparts. It would appear that this child is deficient in visual-motor channel functions and that a program of training to ameliorate this channel deficiency is needed along with some auditory memory training.

A raw score of 9 errors on the Bender Visual Motor Gestalt Test is normal for children in this age bracket and especially so for boys. Gary's score was more indicative of his undeveloped work attack skills than any receptive or motoric expression difficulty. He usually approached tasks in a very superficial and global manner reproducing the designs without checking for detail or completeness. When asked if any differences existed between the task material and his reproduced material, he was very accurate in noting discrepancies and could usually reproduce designs with a high degree of accuracy.

Remedial Program

Main objectives:

1. to increase Gary's auditory memory.
2. to increase Gary's visual sequential memory.
3. to increase Gary's visual closure (to organize and integrate his visual field).

The programs for each individual child were not developed as a step-by-step sequence of activities for remediation. Rather, an attempt was made to guide the teacher in developing her own procedures for working with the child, by which she could do a continuous task analysis of the child's difficulties and needs.

CHAPTER VII

IMPLEMENTATION OF A REMEDIAL PROGRAM

The remediation program for Gary H. as outlined in Chapter VI is very exemplary of all programs followed for the four subjects. Therefore, much thought and planning went into both the selection of remediation materials and selecting the best approach or remedial process that could benefit Gary, his teachers, his classmates, and his parents.

It was decided by his homeroom teacher, the principal and the present investigator, that Gary would benefit most from a specific time allotment with a special education teacher. The special education teacher was responsible for administering the remedial program that had been outlined. This teacher would spend four, half-hour periods per week with Gary, covering certain materials of the program.

The investigator met with the special education teacher and Gary's homeroom teacher and described and interpreted the test results (Chapter VI). It was agreed from teacher reports, classroom observation and diagnostic testing, that the main objectives of the remedial program would be:

- (a) to increase Gary's auditory memory,
- (b) to increase Gary's visual sequential memory,
- (c) to increase Gary's visual closure (ability to organize and integrate one's visual field),
- (d) to increase Gary's length of productivity time, and
- (e) to involve Gary's parents as reinforcers in a non-academic situation.

The investigator explained the general theory of each disability and took responsibility for providing extra materials for the special

education teacher and Gary's homeroom teacher.

The materials that were used by the remedial teacher and Gary's homeroom teacher came from a variety of sources, including books, (Bush, W. & Giles, M., 1969; Kirk, S. & Kirk, W., 1971; Spache, E., 1973; Nelson, L. & Liedtke, W., 1972); remedial programs (Valett, R., 1971), and separate articles. The teachers were given a selection of ideas that covered a certain skill and they chose which exercises they would use. An example of the selection of exercises that could be used in Gary's remedial program are listed below.

Auditory Memory

1. Help direct attention to details, using motor cues, by
 - (a) when presenting a series to be repeated by the child
(3-6-7, c-a-t, h-o-u-s-e, or apples-bananas-oranges),
tapping or making some dramatic gesture with each
element of the series.
 - (b) asking the child to make some motor response such as
tapping, clapping each time an item is given.
2. Help direct attention to details by using visual clues. Present
visual clues momentarily along with the auditory stimulus but
immediately remove the visual aid.
3. Use short periods demanding attention at first, providing reinforce-
ment for attention; then extend the time, using delayed or inter-
mittent reinforcement.
4. Rehearsal - teach the child to rehearse the first part of a stimulus
while the rest is being presented.
5. At the same time, the parents were being informed on how they could
reinforce Gary's academic skills through the use of games, cards,

monopoly, and informal verbal exchanges.

The special education teacher agreed to meet with the investigator every two weeks at which time she reported on the tasks Gary had done and we outlined the next phase of his remediation program. The investigator frequently made short visits to the special education area and encouraged Gary's work and his work habits.

Gary's homeroom teacher was kept up to date on the approaches and materials being used with him so she could continue some of the extra remedial exercises in her regular classroom.

After a month of individual help, Gary's homeroom teacher stated that she had noticed a marked improvement in his attention and general work habits. It was at this point that Gary seemed ready to join a learning group of three other students. The main objectives were: to have Gary take responsibility for working alone for longer periods of time and to aid his attentiveness and work habits in group work. Gary's homeroom teacher was now part of the planning group that met every second week to analyse his past tasks and to outline the next sequential learning experience.

Parallel with the time spent with the teachers, planning and analyzing Gary's remedial tasks, the investigator scheduled a half hour counseling period a week with Gary. The investigator played games with Gary, the intentions were: to continue the rapport established during the data gathering interviews and the diagnostic testing; to allow an informal break in which Gary could disclose any positive or negative feelings he might have towards the remedial process.

The same procedure that was followed in the setting up and administrating of Gary's remedial program was carried out by this

investigator for the other three subjects.

CHAPTER VIII

RESULTS AND DISCUSSION

The main purpose of the present investigation was to determine whether adequate diagnoses, intensive development of remedial treatment programs and detailed follow-up had any effect on the improvement of pupils diagnosed as having a learning deficit.

In the first part of this section the results derived from testing the four subjects and the control group are presented. Hence, the results observed for the subjects on the WISC, ITPA, Bender Gestalt and the WRAT are described. A discussion with implications and recommendations is also included in this Chapter.

Results of the Illinois Test of Psycholinguistic Abilities

The gain or improvement of the four subjects on the four main levels was significant (Table 7).

- a. An average gain of 1 year 3 months was achieved on the Representational level.
- b. An average gain of 1 year 7 months was achieved on the Automatic level.
- c. An average gain of 1 year 2 months was achieved on the Auditory-Vocal level.
- d. An average gain of 0 years 11 months was achieved on the Visual-Motor level.

Subjects gained a significant amount in individual subtests, except in a few subtests.

The four subjects averaged a 1 year 6 months increase in their

TABLE 7
RESULTS OF PRE- AND POSTTESTING OF THE FOUR SUBJECTS ON THE ITPA

Illinois Test of Psycholinguistic Abilities	Subjects' Names											
	Michelle			Gary			Diana			Clayton		
	Pre	Post	Improve- ment	Pre	Post	Improve- ment	Pre	Post	Improve- ment	Pre	Post	Improve- ment
Auditory reception	7-3	5-8	-1-7	6-8	9-2	+1-6	8-7	8-7	0	9-6	8-7	-0-11
Visual reception	4-10	7-4	+2-6	7-1	7-1	0	7-1	8-4	+1-3	7-4	8-10	+1-6
Auditory association	5-5	6-9	+1-4	6-0	7-11	+1-11	7-8	7-8	00	8-3	8-3	0
Visual association	5-9	8-11	+3-1	8-11	4-10	-4-1	6-6	8-0	+1-6	6-3	8-0	+1-9
Verbal expression	9-10	9-10	0	7-8	10-2	+2-6	6-2	8-10	+2-8	5-8	8-10	+3-2
Manual expression	8-4	10-4	+2-0	8-4	9-2	+0-10	10-4	10-4	0	10-4	10-4	0
Grammatical closure	6-8	7-7	+0-11	8-10	10-4	+1-6	8-2	8-6	+0-4	7-7	7-0	-0-7
Visual closure	9-0	8-9	-0-3	4-6	6-9	+2-3	6-4	9-10	+3-6	7-6	9-0	+1-6
Auditory memory	10-3	10-3	0	5-3	9-10	+4-7	5-0	10-3	+5-3	6-3	10-3	+4-0
Visual memory	5-10	5-10	0	4-1	4-1	+0	8-4	9-9	+1-5	6-2	6-6	+0-4
PLA	7-4	8-3	+0-11	6-8	7-10	+1-2	7-3	9-1	+2-2	7-4	8-8	+1-4
C.A.	6-11	7-6	+0-7	6-10	7-5	+0-7	6-11	7-7	+0-8	7-1	7-5	+0-4
M.A.	7-6	8-8	+1-2	6-9	3-1	+1-3	7-5	9-7	+2-2	7-6	9-2	+1-6
Representational level	6-11	8-1	+1-2	7-5	8-1	+0-6	7-9	10-3	+2-6	7-10	8-9	+0-11
Automatic level	7-11	8-1	+0-2	5-8	7-9	+2-1	6-11	9-7	+2-8	6-10	8-2	+1-4
Auditory-vocal	7-11	8-0	+0-1	6-10	8-8	+1-10	7-1	8-9	+1-8	7-5	8-7	+1-2
Visual-motor	6-9	8-2	+1-5	6-7	6-4	-0-3	7-8	9-3	+1-7	7-6	8-6	+1-0

mental abilities as determined by the ITPA tables.

Bender Visual Motor Gestalt Test

The four subjects experienced an average raw score gain of $5\frac{1}{2}$, and an average increased grade placement of approximately 3 grades (Table 8). A more detailed analysis of the pre- and postdrawing of the Bender indicated that the majority of the improvement in the raw scores were in the motoric area of expression and only a few were in the receptive area of learning. The subjects approached the task of the posttest with more confidence and ease than they did on the pretest. This confidence could be attributed to their improvement in work habits and academic success due to the remedial process.

Wide Range Achievement Test

Control Group

The ten control subjects were picked by a random sampling technique of putting the names in a box and drawing ten names out of 45. The control subjects entered the experimental design with an average reading grade score of 3.9, and an average spelling grade score of 3.3 and an average arithmetic grade score of 2.2.

The control group achieved an average increase reading grade score of 2.1, and average increased spelling grade score of 1.7 and an average increased arithmetic grade score of 1.07, as determined by the WRAT, by participating in a regular classroom setting with little or no extra outside help (Table 9).

Four Subjects

The four subjects entered the experimental design with an average

TABLE 8

RESULTS OF THE PRE- AND POSTTESTING OF THE FOUR SUBJECTS ON THE BWGCT

Subjects	Pretest Raw Score	Grade Placement	Age	Posttest Raw Score	Grade Placement	Age	Improvement Raw Score	Gain in Grade Placement
Michelle	9	K	5-6	2	4	9	7	4
Gary	9	K	5-6	3	3	8-6	6	3
Diana	10	K	-5	6	2	7	4	2
Clayton	6	1	6-6	1	4	10-6	5	3

TABLE 9

RESULTS OF THE PRE- AND POSTTESTING OF THE CONTROL GROUP ON THE WRAT

Class A Subject	Sub-test	Pretest	Posttest	Achievement
A	a. reading	3.8	5.9	2.1
	b. spelling	2.5	3.9	1.4
	c. arithmetic	2.1	3.6	1.5
B	a. reading	3.6	5.1	1.5
	b. spelling	3.7	4.2	.5
	c. arithmetic	2.4	3.6	1.2
C	a. reading	3.5	6.5	3.0
	b. spelling	3.0	5.0	2.0
	c. arithmetic	2.2	3.6	1.4
D	a. reading	4.0	7.0	3.0
	b. spelling	3.3	4.5	1.2
	c. arithmetic	2.6	3.2	.6
E	a. reading	5.0	6.7	1.7
	b. spelling	4.5	5.5	1.0
	c. arithmetic	2.4	3.2	.8
F	a. reading	4.1	4.7	1.6
	b. spelling	3.7	5.0	1.3
	c. arithmetic	1.0	3.2	2.2
G	a. reading	3.3	4.7	1.4
	b. spelling	1.5	3.9	2.4
	c. arithmetic	2.4	3.2	.8
H	a. reading	4.1	7.2	3.1
	b. spelling	3.5	5.0	1.5
	c. arithmetic	2.6	3.6	1.0
I	a. reading	4.1	5.7	1.6
	b. spelling	3.9	5.3	1.4
	c. arithmetic	2.4	3.2	.8
J	a. reading	3.8	6.5	2.7
	b. spelling	3.8	5.3	1.5
	c. arithmetic	2.6	3.0	.4

reading grade score of 1.7, an average spelling grade score of 1.4, and an average arithmetic grade score of .6.

Improved results (Table 10) were attained in the program with an increased average reading grade score of 1.6, an increased average spelling grade score of 1.9 and an increased average arithmetic grade score of 2.77. The subjects' increased spelling grade score was .2 years above that of the control group and their increased arithmetic grade score was 1.8 years above that of the control group. The control group's reading increase was .5 years above that of the experimental group's increase.

The extra remedial programing enabled the four subjects to be equal to their classmates or in some cases superior to their classmates in the academic subjects of reading, spelling and arithmetic.

The teachers of the four subjects expressed a positive reaction to the children regarding their improvement in the three major academic subjects of reading, spelling and arithmetic. Improved work habits, work strategies, attentiveness and a more enthusiastic attitude to the learning environments, were statements used by the teachers to describe the four subjects. The teachers observed that the students appeared more relaxed and confident in that they smiled more, responded to the teacher's questions frequently and engaged in group activities more readily. The subjects reported that the work was easier and they now enjoyed the challenge of most new materials. They perceived their teachers as people who were concerned about their learning and willing to provide them with extra work and time.

The principal reported that he was impressed and pleased by the success of the program in these ways: firstly, the children were now

TABLE 10

RESULTS OF THE PRE- AND POSTTESTING OF THE FOUR SUBJECTS ON THE WRAT

Subject	Sub-tests	Pretest grade equivalents	Posttest grade equivalents	Achieve- ment
Michelle	a. reading	1.5	3.1	+1.6
	b. spelling	1.4	2.7	+1.3
	c. arithmetic	Kg.6	3.0	+3.4
Gary	a. reading	1.9	3.6	+1.5
	b. spelling	1.7	3.0	+1.3
	c. arithmetic	1.2	3.6	+2.4
Diana	a. reading	1.4	2.8	+1.4
	b. spelling	Kg.7	2.6	+3.3
	c. arithmetic	Kg.5	2.8	+3.3
Clayton	a. reading	2.1	3.9	+1.8
	b. spelling	1.8	2.9	+1.1
	c. arithmetic	1.6	3.6	+2.0

doing average to above average classroom work; secondly, the teachers were not complaining about the subjects and therefore, were generally more content; and thirdly, he was pleased to be able to talk to the parents about the positive progress of their children rather than their learning difficulties.

The parents reported that their children were happier about going to school and happier when doing school related activities. They reported a decrease in (a) physical complaints prior to leaving for school, (b) complaints about the difficulty of the work and (c) complaints about or avoidance of any type of work. The children were smiling more, talking about the work they were doing at school, asking their parents to help them with their homework, and generally being much more pleasant to be around. These were some of the statements used by the parents to describe the changes that occurred in the interval of the remedial program.

Recommendations and Discussion

The overall results of the present study were positive from the children's point of view as well as from the school's point of view. There are certain points arising from a consideration of the results of the study, which may be noteworthy.

Recommendations for working with teachers, parents and children.

1. Have a good understanding of the teachers' teaching methods and philosophies.
2. Spend time developing a good working relationship with the teacher, involving her in the planning of the program in order that her ideas are being integrated.
3. Present the teachers with ready to use remedial exercises at the

start of the program.

4. Present remedial materials in several small packages as opposed to one large package.
5. Do not burden the teacher with an unnecessarily large volume of reading material - pre-select.
6. Make frequent visits to monitor the teaching process and to give support and praise to the teacher and pupil.
7. Interviews with parents, gathering medical, developmental and social history, give valuable insight into the child's learning processes as well as parent-child relationship.
8. Lay plans to have parents involved in the remedial program in some capacity.
9. Develop rapport with the child as time permits, as he needs to be receptive to the extra work load to which he will be exposed.
10. Recommend one comprehensive test battery at the outset, and then try to avoid repeated testing.
11. Focus energy on effective educational programming.
12. Make sure the program is specific to the individual learning needs and the learning style of the child.
13. Use observation and task analysis as a basis for planning and evaluating the remedial program.
14. Make use of child, teacher and parental feed-back in future planning and evaluation of the remedial program.
15. Use various techniques to motivate the child (*e.g.* Behavior Modification).
16. Make sure the program is integrated into the regular learning experience of the student as soon as possible.
17. Keep parents informed about the remedial program and the important

part they play in its success.

Recommendations for further research

1. Plan a matched control group that receive no extra remediation or adult supervision.
2. Plan a matched control group that would receive only adult attention in the form of informal games or discussion.
3. Work with a larger number of students.
4. Try separate variables that effect the improvement in academic tasks.
5. Discuss the implication of the only child syndrome.
6. Design a flow-chart or card index system to help regulate your follow-up duties.

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APPENDIX A

PARENT FORM:

DATE: _____

Father's name:

Mother's name:

First Middle Last

First Middle Last

Present Address:

Birthdate: _____
Day / Month / Year

Day / Month / Year

School Grade Completed:

Occupation:

Employer's Name:

How long: _____

Previous Employment:

How Long: _____

Present Gross
Monthly Income: _____

Home Owners: _____

How Long: _____

Renting: _____

How Long: _____

Family Mobility:

Moved - How Often: _____

Dates: _____ years

Married _____ Single _____ Other _____

How Long _____

- 2 -

GENERAL HEALTH:

Excellent _____ Good _____ Fair _____ Poor _____

Family History of: Allergies _____ Blindness or squint _____

T.B. _____ Diabetes _____

Early Deafness _____ Mental Illness _____

If yes to any of the above, explain: _____

Are any other persons living or working in your home? If yes,
explain: _____Are any languages other than English spoken in your home? If yes,
explain: (what type, how much, etc.) _____SOCIAL ACTIVITIES:

Type and length of vacation _____

List of recreational or social activities (bowling, dancing, etc.) _____

Family Involved Activities: _____

APPENDIX B

IDENTIFYING INFORMATION:

Child's Full Name:

Last

First

Middle

Date of Birth:

Day / Month / Year

Age

Sex

If adopted, at what age? _____

Present School: _____

Person filling out this questionnaire,
relationship to child: _____

This Child

Prenatal Health of Mother: Excellent _____

Good _____

Fair _____

Explain: _____

Trouble with pregnancy? _____

Trouble with birth? _____

Delivery:

Hospital - Name: _____

Home: _____

Delivered by: Midwife _____

Doctor _____

Unassisted _____

Length of Pregnancy: _____

Conditions at Birth:

Weight at Birth _____

lbs.

Height at Birth _____

ins.

Length of stay in hospital _____

Conditions of stay in hospital _____

Home:

Difficulties with: Feeding _____ Sleeping _____

If yes, explain: _____

HEALTH HISTORY:

<u>Illnesses:</u>	<u>Age:</u>	<u>Duration - Severity - Medication</u>	<u>Temp.</u>
Measles	_____	_____	_____
Chicken Pox	_____	_____	_____
Mumps	_____	_____	_____
Scarlet Fever	_____	_____	_____
Croup	_____	_____	_____
Tonsillitis	_____	_____	_____
Bronchitis	_____	_____	_____
Whooping Cough	_____	_____	_____
Ear Aches	_____	_____	_____
Ear Infection	_____	_____	_____
Ear Drainage	_____	_____	_____
Eye Infection	_____	_____	_____
Influenza	_____	_____	_____
Pneumonia	_____	_____	_____
Frequent colds	_____	_____	_____
Allergies	_____	_____	_____
Poliomyelitis	_____	_____	_____
Encephelites	_____	_____	_____
Meningitis	_____	_____	_____
Convulsions	_____	_____	_____
Dental	_____	_____	_____
Other	_____	_____	_____

Complications to any of the above _____

Has the child had any of the following? Please describe:

Surgery: _____

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Accidents: _____

Hospitalization: _____

Has your child been inoculated or vaccinated? At what age, and were there any after effects? _____

Was there any change in behavior following surgery, accident, hospitalization or inoculations? If so, describe: _____

At what age did child sit up? _____

Crawl? _____ Use Words _____

Walk _____ Speak Sentences _____

Become Toilet Trained _____

If Difficulties, explain: _____

Did the child have difficulty with vision? _____

Hearing _____ Clumsy _____

Bedwetting _____ Day wetting _____

Sleeping _____ Feeding _____

Thumbsucking _____ Balance _____

Manual Dexterity _____ Running _____

Nail Biting _____ Overactive _____

Climbing _____ Babyish _____

Disobedience _____ Frequent Fighting _____

Quiet _____ Fears _____ Unhappy _____

Does not seem to get along with peers _____

Describe the child's relationship with family members: _____

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Mother:	Age	1	2	3	4	5	6	7	8	9	10
Did you work											
How Long											
What Hours of Day											
Volunteer Work											
How Long											
What Hours of Day											

Does or did husband's work take him away from home? _____

If yes, explain (years and amount of time per month) _____

Have either mother or husband been separated from family for extended period of time (hospitalization, etc.) _____

If yes, explain (year and circumstances) _____

Was there any change in behavior following the separation?

SOCIAL BEHAVIOR

What are the child's favorite activities at home?

What are the child's favorite activities outside of the home?

PERSONAL-SOCIAL BEHAVIOR

RATING

COOPERATION

Continually disrupts classroom; unable to inhibit response	1
Frequently demands attention; often speaks out of turn	2
Waits his turn; average for age and grade	3
Above average; cooperates well	4
Excellent ability; cooperates without adult encouragement	5

ATTENTION

Never attentive; very distractible	1
Rarely listens; attention frequently wanders	2
Attention adequate for age and grade	3
Above average in attention; almost always attends	4
Always attends to important aspects; long attention span	5

ORGANIZATION

Highly disorganized, very slovenly	1
Often disorganized in manner of working; inexact, careless	2
Maintains average organization of work; careful	3
Above-average organization; organizes and completes work	4
Highly organized; completes assignments in meticulous manner	5

NEW SITUATIONS (parties, trips, changes in routine)

Becomes extremely excitable, totally lacking in self-control	1
Often overreacts finds new situations disturbing	2
Adapts adequately for age and grade	3
Adapts easily and quickly with self-confidence	4
Excellent adaptation; shows initiative and independence	5

SOCIAL ACCEPTANCE

Avoided by others	1
Tolerated by others	2
Liked by others; average for age and grade	3
Well liked by others	4
Sought by others	5

RESPONSIBILITY

Rejects responsibility; never initiates activities	1
Avoids responsibility; limited acceptance of role for age	2
Accepts responsibility; adequate for age and grade	3
Above average in responsibility; enjoys responsibility; initiates and volunteers	4
Seeks responsibility; almost always takes initiative with enthusiasm	5

COMPLETION OF ASSIGNMENTS

Never finishes even with guidance	1
Seldom finishes even with guidance	2
Average performance; follows through on assignments	3
Above-average performance; completes assignments without urging	4
Always completes assignments without supervision	5

RATING

TACTFULNESS

Always rude	1
Usually disregards feelings of others	2
Average tact; behavior occasionally inappropriate socially	3
Above average in tactfulness; behavior rarely inappropriate socially	4
Always tactful; behavior never socially inappropriate	5

SCORE

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